An Eſsay
on
Uterine Hæmorrhage,
Submitted to the
Medical Faculty of the
University of Pennsylvania,
For the Degree of
Doctor of Medicine.

By
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of Virginia.

January 8th. 1829

Paſsed March 9. 1829

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Uterine Hæmorrhage.

Who can this field of miracles survey,
And not with Galen all in rapture say,
Behold a God, adore him, and obey!

Blackmore.

In entering upon Uterine Hæmorrhage as a subject upon which to write a Thesis, I am fully aware of the difficulty of my undertaking, and of the extensive field of investigation which is opened to my view. Even on the very threshold, whilst surveying the surface over which I have to move, I am almost constrained to abandon it; knowing the feebleneſs of my own resources, and the extent and intricacy of my subject.

But as there are few accidents to which the human female can be exposed of a more truly alarming character than the one now in question, and none that require more, the serious attention and deliberate reflection of the practitioner; surely I shall be excused for devoting to it a large share of mine, and for the

many imperfections which this dissertation must of necessity embody.

Nor is it reasonable to suppose that I shall be able to advance any great deal of practical moment or observation. I shall be content therefore, with but few exceptions, to traverse the ground which has been so often plodded by others, without supporting any opinion that is not upheld by the best, and as I conceive, the most respectable authorities.

I do not consider myself bound either, to adhere to any particular system or method, but shall adopt that which to me appears least objectionable, and best calculated to embrace within as narrow a compass as possible, the different views which I may entertain upon this subject.

It would lead to unnecessary prolixity too, (even if I had time to bestow upon it) to enter into the minutiæ of the various causes which may give rise to, and the different modes of treatment which have been recommended in uterine hæmorrhage.

The first condition is truly alarming, and requires most active measures. This state of the uterus may be produced by any of the causes, that have been aſsigned by Leroux, as productive of uterine inertia; but the most frequent of them, is a long protracted labour, or a too sudden emptying of the uterus, by the too rapid delivery of the child. Should flooding proceed from this cause, our treatment must be properly timed, and well directed, or the woman will succumb, whilst we are temporising. We must commence with active frictions over the region of the uterus, grasping the uterus by closing our fingers upon it. Exhibiting large doses of acetate of lead and opium. Cold water let fall from a height upon the abdomen. Brandy and water may be given, if there be much faintneſs. Should nausea, or vomiting exist, it should be removed by opium, especially the former as it produces considerable relaxation, and interrupts the tonic contractions of the

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of the uterus. Fresh air should be freely admitted. Warmth applied to the extremities; and the ergot may be tried. Ice introduced into the cavity of the uterus is recommended by Levret, and Barlow. It sometimes happens that all these remedies disappoint us, and we are then obliged to introduce the hand into the uterus, irritate its parietes until contractions ensue, detach the placenta, and gradually withdraw it. Should flooding take place under the second condition, little benefit can be derived from internal remedies, or external applications. Our indications are then to discover the cause of the hemorrhage, and remove the placenta. The first can only be certainly ascertained by a proper examination. The latter must be accomplished by introducing the hand, removing that portion of the placenta which is detached, and leaving the remainder to the efforts of nature. for violence in its extraction

I shall proceed therefore to treat of it in a general way, and from a careful examination, shall select and furnish such opinions as shall appear to me mostly to merit consideration. The course, I propose to pursue, is–

First. To point out briefly the difference between the menstrual fluid, and that of uterine hæmorrhage.

Second. To show the connexion between the ovum & uterus.

Third. To show the causes which may impair or destroy that connexion, and their modus operandi.

Fourth. To show the periods at which hæmorrhage may take place, and the treatment of each.

I shall now proceed to treat of each of these in the order in which it presents itself, and–

First. To point out briefly the difference between the menstrual fluid, and that of uterine hæmorrhage.

Every gland of the human body has assigned to it, an action peculiar to itself. Thus the salivary gland, secretes the saliva; the lachrymal gland, the tears; the liver the bile; the kidneys, the urine; and I may add, (considering

its function similar) the uterus, the menstrual fluid. In this way, assuming the office of the uterus to be that of a gland, may we account for the manner in which this fluid is made to differ from the common mass of blood.

All the secretions of the animal body, are furnished with materials from the blood, but have their properties somewhat altered by the secretory action of the different glands; and as each gland differs in structure, so does that fluid in property eliminated by it.

Physiologists for a long time doubted among themselves from what set of vessels the menstrual fluid proceeded, and why it appeared and disappeared at certain epochs, generally observing from its commencement and during its continuance, unless interrupted by pregnancy, lactation, or disease, the strictest regularity as to the periods of its return.

It is now, however, pretty generally conceded that this fluid is a secretion, and proceeds from the extremities of the arteries of the womb. Granting this to be true we can

upon the principle of the actions of all glands, at once account for the transmutation, which before it can be formed, it is neceſsary for it to undergo.

I shall not entangle myſelf, however, in any physiological discuſsion upon this subject, as it would be useleſs and entirely foreign to my purpose. The general remarks already delivered will suffice. My object is to show in what respects the menstrual fluid differs from that of uterine hemorrhage – a knowledge of which is so eſsential to the succeſs of a practitioner, and without which his judgment must frequently be misled.

I cannot more effectually do this than by quoting the language of Dr. Dewees. This able writer and experienced physician thus expreſses himself: 1st "Its colour," (meaning that of the menstrual fluid)" is between the arterial and venal blood; being leſs brilliant than the former, and more florid than the latter: 2nd It never separates into parts; blood drawn, or evacuated from any other part of a healthy body, does separate in a short time into its prin-

-principle component parts: 3rd It never coagulates though kept for years; while other blood, when free from disease quickly does, when exposed to the influence of the air: 4th Its odour is remarkably distinct from that of the circulating maſs; and it is leſs disposed to putrefaction."

The menstrual fluid also differs from the common blood, as some have supposed by the absence of fibrine, but the author above referred to, does not expreſs himself with any degree of certainty upon the subject, and seems disposed to believe that this portion, (meaning the fibrine) has been changed during the proceſs of elaboration. The want of coagulability in the blood, should not however invariably be looked to as an evidence of the absence of fibrine, for we know that there are many diseases, (whose phenomena I shall not undertake to explain) which can and do deprive it of this peculiar property. Thus in certain kinds of small pox, putrid fever, and scurvy it looses this property, and in the blood of persons killed by the electric fluid

its capacity to coagulate is destroyed.

Mr Hunter thought that the reason of the menstrual fluid's not coagulating was to be attributed to the loſs of vitality during the proceſs of secretion, but Dr Dewees differs from him upon the ground that this fluid "is thought to resist putrefaction longer than common blood."

I have already gone farther in this subject than I intended, and shall therfore abandon it, and attempt —

To show the connexion between the *ovum* and *uterus*.

After the *ovum* has been impregnated, it is loosened from its attachment with the *ovarium*, and paſses thro' the canal of the Fallopian tube into the cavity of the uterus. But this is not always the case; for it sometimes remains within the *ovarium*, sometimes paſses into the tube without going farther, and at others is lost in the cavity of the abdomen, giving that appellation to the pregnancy into what part

* Different theories have been, and are entertained respecting the formation of the *decidua reflexa*, but as I conceive they can be of little moment I have omitted to mention but one in this place.

soever it may be lodged.

Whether the *ovum* paſses into the uterus or not, after the impregnation of the former, the latter takes on a synchronous action with the whole uterine system and sets about secreting the membrane called *decidua vera* or *externa*. When however in cases of natural pregnancy, the ovum reaches the orifice of the tube, as it there meets with the *decidua vera*, it pushes it forward, towards the cavity of the *uterus*, until every portion of it comes in contact with itself, constituting by this means, the *decidua reflexa*, or as Mr. Burns very properly calls it, the *decidua protrusa*.+

It will now be seen from what I have said that of the *involucra* surrounding the embryon, the *uterus* forms two membranes which serve as the medium of connexion between the fœtus and mother. That surface of the *uterus* which is exposed by the protrusion of the external *decidua* does not remain so long; for the womb in conse-

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consequence of the presence of the ovum, continues its accostomed action, and soon supplies the deficiency. The same surface also is that upon which the placenta is afterwards to be located, but this is not uniformly the case as it is sometimes found in one part and sometimes in another. Nature tho' in the plenitude of her wisdom, and with the same care we observe in most of her works, generally fixes it upon that part from which the greatest supply is to be found. But more of this, when we come to speak particularly of the placenta.

The embryon brings along with it from the ovarium, two membranes, the Amnion and chorion, which together with itself, "constitute the ovum.

The amnion is that membrane which is nearest to the fœtus, and is much more thin and delicate in early pregnancy than at a later period of utero-gestation. It contains the liquor amnii, or that watery bed (if I may so expreſs myself) for the

repose of the fœtus during uterine existence. It seems also to answer another important end in the proceſs of generation, as the embryon swims in it, and from a preponderance of the head and upper part of the body, aſsumes that position *in utero* which is most favorable to "natural and safe" delivery. The quantity of this fluid is always in an inverse ratio to the size and age of the fœtus, which is one argument against its being the *pabulum* of the child.

The chorion comes next and has interposed between itself and the amnion "a jelly like substance which fills up the space between them". The *amnion* however in the progreſs of its growth, diminishes the quantity of this fluid, and is brought to touch the chorion. Amnios et *chorion sibi invicem leviter* cohærent. In advanced pregnancy, it is not so strong as the amnion but more so in the early months. "It is this coat," says Dr Dewees, "which furnishes from its external surface, the innumerable veſsels by which it unites itself to the *uterus* by means of the decidua."

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There is a free interchange of veſsels — those of the *decidua* shoot forth to meet those already advancing from the *chorion*, and an intercommunion takes place not unlike that (to use a familiar comparison) presented by the fingers of each hand thrust between each other. Such is the union effected by this means between these two membranes, that "in cases of abortion" one always brings away with it the other.

The *placenta* is the medium by which the circulation is kept up between the fœtus and mother, and the former nourished. It is formed by an accumulation and augmentation of the veſsels of the fœtus and womb. Denman does not think it was made up of veſsels alone, and Harvey uses this language in speaking of it; *in quibusdam placenta reperitur, craſsior, amplior et sanguine abundantior.* Be it what it may, we know it is extremely vascular. Its inner surface is covered by the *chorion* and *amnion*, and its external one is very irregular, and generally attached to the *fundus*

of the womb. Its uterine surface is said very appropriately to resemble the convolutions of the intestines, or the infractuosities of the brain.

Having thus run thro' with as much rapidity as I could, an anatomical and physiological sketch of the parts concerned in uterine hæmorrhage, and of the connexion of the ovum and uterus, a knowledge of of which I consider eſsential to a clear and distinct comprehension of the subject, my next step will be—

To show the causes which may impair or destroy that connexion, and their *modus operandi*.

There are so many links in the chain of causes calculated to produce hæmorrhage, that were I to notice each, either of itself would furnish a subject sufficiently ample for an inaugural diſsertation and incumber this with a load of uſeleſs materials, that would tend more to confuse than to elucidate it. I shall notice therefore, a few of the most prominent, and consider them as amply sufficient for every neceſsary

purpose.

A woman is always more liable to abortion and consequently to hæmorrhage, cæteris paribus, in the early periods of pregnancy than in the more advanced stages. This may be owing probably to the slight adhesion which then exists between the chorion and decidua.

A large majority of writers believe that hæmorrhage invariably proceeds from a partial or entire separation of the placenta and uterus, altho' there are not wanting some, who contend that it may also be brought on by a destruction of continuity between the membranes alone. For myself, I am disposed to think that it may be brought on from either cause, or both; but do not advance this opinion from any knowledge of my own. I merely throw it out as a conjecture. It can be of no practical utility whatever, as in either event the treatment is the same.

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I shall be satisfied to examine into the causes, which may give rise to hæmorrhage and at the head of the catalogue, I may, I think, with propriety venture to put down *mechanical violence*.

I. This may consist in the injury which the woman may receive thro' the agency of any extraneous influence, such as blows, falls, or violence of any sort in whatever way offered.

Some of these agents are more direct in their operation, and produce an instantaneous separation of the *placenta*; others by destroying the equilibrium of the circulation, cause a preternatural determination of blood to the vessels of the *uterus*, which being unapprized, (if I may be allowed the expression) of the visitation of this unexpected and resistless current, a rupture of their coats is the almost inevitable consequence.

II. Fatigue also by producing a relaxation of the muscular fibres of the *uterus* as well as of the whole body may

produce hæmorrhage and abortion. This may consist of exercise of any description, as walking or riding to such lengths as to exhaust the vigour and strength. Violent and frequent strainings at stool; fatiguing the abdominal muscles in any way; elevating the arms so as to take any thing from a height; stretching or stooping by which the womb is compreſsed; have all in their turns given rise to hæmorrhage.

III. Hæmorrhage is sometimes consequent upon an increased action of the veſsels of the _placenta_ and _decidua_. "This," says Mr. Burns, "may either be connected with a general state of the vascular system, marked by plethora, or arterial irritation; or it may be dependent upon the state of the _uterus_ itself." As the phenomena presented by the action of the blood veſsels in this case, are similar to those described under the article "mechanical violence," I shall paſs on without saying more upon it.

IV. Paſsions or violent emotions of the mind, such as gry

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joy, fright, surprise and the like, have each and all at times given rise to hæmorrhage. In their operation they lead to the same ultimate result, altho' the means by which they attain it are different. Some produce an immediate increased velocity in the circulation, and throw out of tune, the regular and harmonious actions of the whole vascular system. Others, effect it by, producing a temporary suspension of vascular action and a stoppage of the flow of blood, whereby this fluid is detained within the walls of the vessels longer than usual, and the normal functions of the system deranged.

V. Certain medicines, and such as act specifically upon the uterus, by inducing a hæmorrhagic effort in its arteries, have been known to produce a rupture and extravasation. Of these, as having the greatest agency in causing such a result, may be mentioned those which come under the class of Stimulants and Emmenagogues, and hence the propriety of proscribing ter

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these are in many cases of pregnant women.

VI. From the great pliability poſseſsed by the *uterus*, it accommodates itself to the various points or irregularities presented by the *ovum*, and yields by a gradual development of its several parts up to the usual time of parturition, to the resistance offered by the latter. When, however, this does not obtain, or when there is "a want of correspondence between the action of the *ovum* and *uterus*, or a disproportion in the relative strength of their veſsels"; on account of too great a quantity of blood being received into them, and their incapacity to circulate or support it, their coats are lacerated, and a hæmorrhage follows.

VII. Whenever the action of gestation ceases prematurely, a hæmorrhage always, to a greater or leſs extent ensues. The *ovum* in this case may, with much propriety be considered as a foreign body. The neck of the *uterus* commences to unfold itself; the tonic contraction of its body and *fundus* comes on, and as Harvey expreſses

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it: *Fœtus ejicitur potius quam paritur.*

VIII. Pain also has been considered a cause of hæmorrhage, but as I look upon it as nothing more than the effect of some other cause, I shall forbear specially to notice it.

IX. Lastly I come to an implantation of the *placenta* over the neck of the *uterus*. Hæmorrhages accruing from this cause may be either accidental or unavoidable. In the first, a separation takes place from some casualty or other. In the second it comes on spontaneously by the natural action of the parts; for the *placenta* being ingrafted upon the substance of the neck of the *uterus*, when it is called on for its *quantum* of *dilitation*, a severance of some of the veſsels follows, and blood to a greater or leſs extent is poured out. Premature delivery may sometimes be induced, and when it is not, a temporary respite from the flow of blood succeeds. At once all the apprehensions of the poor woman are dispelled and she again cherishes the fond hope, that she will at

last give birth to a living child. But soon she is made to discover how mistaken she was, and on a return of the flooding not only fancies to herself that her child must be destroyed, but that the tide of her own existence is fast rolling away. Such is the state of disquietude into which the unfortunate female is thrown, and such will it continue to be up to the full period of utero-gestation.

Levret, Mauriceau and La Motte, were the first to notice "this particular location of the placenta", and they all believed it was owing to its precipitation after an entire separation from the *fundus* of the *uterus*. Several are the theories that have been sent forth to the world to show the cause of this unnatural position of the placenta: but none that I have seen are able satisfactorily to account for it. Indeed the result of all enquiry is conjecture, and must ever continue to be. There is no light by which the experimentalist can be led. It is one of

the mysteries of nature which mans ingenuity can not unravel. He may go on heaping theory upon theory and piling Pelion upon Olympus from the first dawn of reason to the hour of his dissolution, and will only have the consolation to perceive, what he he imagines to be the cause, thro' the twilight of hypothesis.

Hæmorrhages generally from whatever cause induced, are more or less alarming in proportion to the extent of the lesion, the excitement of the system, the augmentation of the vessels and the contraction of the uterus.

Before concluding this part of my subject I have only to observe that I have omitted to mention many causes perhaps equally efficient with some of those enumerated to the production of hæmorrhage; and of those I have mentioned, some probably I have

have treated on the [illegible] separately, I have done so with a view to show in what manner these agents produce differently the same effect so that by [illegible] of reasoning the principles upon which all of them act may the more be understood.

My next object will be to take into consideration — the different periods at which hæmorrhage may take place and the treatment of each.

Before I proceed entering upon the different periods at which hæmorrhage may take place I will premise a few general remarks.

There is no time after the first month of gestation that the woman is exempt from such an occurrence; as after that period it is to be supposed that a union to a greater or less extent has been effected between the ovum and uterus. Any thing therefore that would destroy this connexion, would occasion a hæmorrhage of an alarming character unless arrested by the timely interposition of art, or the conservative powers re

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Hence the idea of some that floodings are not dangerous before or at the period of three months should be most strenuously protested against, and one inculcated showing the evil which after the first month might ensue from the procrastination or delay of the proper remedies to be employed. In this way might physicians be put on their guard and the life of many a child saved.

As the different periods of pregnancy will sometimes present different phenomena it is not to be presumed that the treatment of each will be identically the same; and whenever a change becomes necessary, it can generally be made at the good sense and discretion of the practitioner. A practice deduced from the principles I shall adopt, I flatter myself however, would not prove injudicious; and if it fail of success, can never, I am certain, ag ggra

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In this part of my subject, as I consider it by far the best with which I am acquainted, I shall follow nearly in his footsteps, the division laid down by Dr Dewees, which embraces the four following periods: 1st "That period of its occurrence in which the *ovum* is entirely surrounded by the *decidua* and *decidua reflexa*; this will comprehend the first four or four and a half months of pregnancy. 2nd Into all the remaining period of utero-gestation. 3rd Into the period between the birth of the child, and the expulsion of the *placenta*. 4th Into that which may follow the expulsion of the *placenta*." And—

First period.—The *ovum* after an expulsion from the *uterus* after the fourth and from that to the fifth month of pregnancy, generally exhibits upon every part of its surface, marks" of attachment to the parietes" of the latter.

The effects of the separation of the *ovum*, may be different, as it may take place, at the fundus, the body, or the neck of the uterus. In the latter the hæmorrhage is comparatively inconsiderable and the separation slight, whereas in the two former when a partial separation takes place, on account of the neceſsity for an outlet for the blood, the tenure between the ovum and uterus is destroyed, and it goes on gradually working its paſsage and accumulating in its progreſs, until at last it iſsues forth from the mouth of the womb.

In this way may we account for abortion in cases where there is slight hæmorrhage, and none sometimes where it is very great; for in the latter nothing obstructs the course of the blood; and in the former, it preſses upon the parietes of the *uterus*, and excites its muscular fibres to contraction, which is usually accompanied with pain and followed by the expulsion of the fœtus.

As it is impoſsible for us to say with certainty in what cases the _ovum_ may, and in what it may not be saved, unleſs contra-indicated by the most positive aſsurances of an ultimate failure, it becomes our duty to use every effort in our power to preserve it.

The least equivocal signs which would seem to declare the utter futility of all our exertions to prevent abortion, are laid down by Dr Dewees, and surely I cannot do better than to quote his language on the occasion. This experienced writer says, that "when the neck of the uterus is distended so as to resemble in feel the extremity of an egg, that abortion will always sooner or later take place, however small the opening of the os tincæ may be. In this case the uterus is thrown into complete action, and the extension of the neck of the uterus just spoken of is the effect of its contractions. There is another mark equally unequivocal; namely, the ceſsation of the morning sickneſs; a diminution of the abdominal tumour; and above

all the secretion of milk "followed by flaccid breasts."

From what our author here says, it would appear that all our endeavours in this state of things, to preserve the ovum, would prove equally nugatory and ineffectual. Our attention therefore, should be directed to the condition of the woman alone.

The state of the *os uteri*, any more than the quantity of blood lost, can furnish us no positive evidence as to the manner in which the case may eventuate; for the former has been known to be open, and a good deal of the latter expended, and still the ovum preserved; and conversely, the quantity of blood has been small, and the os *uteri* extremely rigid and closed, and yet the *ovum* cast off.

All sanguineous discharges from the *vagena* of a pregnant woman, should be looked upon rather as morbid than otherwise, and a course of treatment instituted as in cases of hæmorrhage, to put a stop to them as speedily as poſsible.

The most important indications to be fulfilled in the treatment of hæmorrhage, are; 1.st To arrest the discharge; 2.nd To overcome pain when it exists; 3.rd To prevent a return of the hæmorrhage.

To answer the end of the first indication a perfect state of quietude both of body and mind, as well as horizontal position should be enjoined. The patient should not be put upon a feather bed, but laid upon a mattress, sacking bottom, or (what is very common in Virginia) upon an under straw bed. She should also be very thinly clad; and all her drinks taken cold. They should be cold balm tea, toast water, ice water, lemonade, water in which roasted apples have been soaked, or something of the sort.

Her food should consist of panada, tapioca, sago, rice, or whatever is light, with which nothing stimulating, as wine or spirit of any sort, is to be combined. These can be rendered palatable by lemon juice, sugar, or nutmeg. All animal food, or any thing gross, should be abjured.

Company also is objectionable, unless sometimes by the particular desire of the patient, and then but one or two of her acquaintances, should be suffered to remain with her at a time, and they not allowed to indulge in any conversation, in which her feelings might be deeply enlisted. They should leave her as soon as possible, and all care taken to secure a perfect state of composure and quiescence.

As Flooding is sometimes brought on by high "arterial action," we should next take into consideration the propriety of blood-letting; and upon this, much may depend.

If the pulse be active, blood must be drawn from the arm, and always in a degree "proportionate to the exigency of the case." How often bleeding may be necessary must depend upon the Flooding and a recurrence of arterial excitement. Blood is sometimes taken to an almost incredible amount, but this should never tempt us to swerve from the rigid path of duty. Whenever it

becomes neceſsary, the lancet should be employed.

After bleeding, we should make use of cold applications to the abdomen and pubes; such as cloths wrung out in cold water, ice, snow and the like. Should pain attend, (which is the second indication we have to fulfil) we should follow up the above applications with Laudanum or Opium in proportion to its degree.

The Acetate of Lead which Dr. Dewees considers one of the most valuable of remedies in this disease, should always be exhibited in quantity and frequency in the ratio of the extent of the flooding. It may be given in two or three grain doses, united with opium, every half hour or leſs frequently, as circumstances may seem to require. If the stomach be too irritable to retain them, they may very conveniently be administered in the form of an enema; and for this purpose twenty or thirty grains of the lead may be mixed in a gill of water with about a drachm of laudanum, and injected into the <u>rectum</u>. If the effect erred

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desired, be then not produced, the injection can be repeated, and so kept up until it is.

Cold vinegar or a bladder nearly filled with ice and water, where the discharge is considerable, applied over the pubic region, has been found to be productive of the most salutary effect.

The Pruſsiate or Hydrocyanate of Iron, has also been used in this disease, and claims our highest attention. I am only astonished that it has not been more extensively employed. From my own experience, I am happy to have it in my power to speak of its efficacy in Uterine hæmorrhage. There is no remedy in the whole Materia Medica that, I conceive, to be more prompt or certain in its effects. Out of many cases, I have known it to fail in scarcely a single one. There is not a period at which hæmorrhage can occur, in which this remedy is not applicable. It is a host within itself and in this disease as was once said of opium in another it is the *magnum dei donum*. Why a

† Since the above was written, I am pleased to find that in a case of protracted Uterine hæmorrhage that was attended with no little hazzard, Dr. Coxe has used this remedy in six grain doses 2 or 3 times a day, and with considerable advantage.

medicine so valuable in itself should have slumbered so long, is to me equally astonishing and unaccountable. Few writers ~~of~~ on medicine seem to have noticed it, or at least to have used it. Dr. Coxe the present professor of Materia Medica, in the seventh edition of his valuable Dispensatory, records a letter from Dr. Thomas of Maryland in whose hands this medicine had proved of the most decided utility; but from his own experience he has been able to say nothing.* Dr. Chapman too than whom I could cite no higher authority, notwithstanding the zeal and care with which he investigates his remedies, has touched so slightly upon this in his Therapeutics as almost to have left it unnoticed.* The most satisfactory account which I have seen of the Prussiat of Iron in Uterine hæmorrhage is to be found in a letter containing several cases, from Tho: H. Wright in the Baltimore Medical and Philosophical Lyceum, Vol. 1. No. III for the year 1811.

New remedies sometimes spring up, and make great

noise in the medical world; but their existence is often ephemeral, and they soon slide into the tomb which prejudice or fashion had opened. This I am sure will never be the fate of the Prussiat of Iron, but that it will continue to be attended with almost uniform success, whenever it may be prescribed, so long as uterine hæmorrhage is one of the many calamities, which have been entailed upon the fairest part of our species. As the cases above alluded to, are too long to transcribe, I will merely give an outline of the symptoms, and of the treatment that was adopted.

The subject of the first case was a lady of a delicate constitution, altho' enjoying a tolerable share of health. It was an instance of protracted uterine hæmorrhage after parturition, and two weeks subsequent to the delivery of the woman. All the usual remedies in such cases, had been employed, and failed. The patient's extremities were cold; her pulse frequent and very small, and her strength so much phau

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exhausted as to allow her to be heard only in a whisper. The Prussiat of Iron was used in half tea-spoonful doses in powder, and repeated pro re nata. The woman recovered, and her recovery was attributed to the Prussiat of Iron.

The second is a case in many respects similar, and the discharge 10 days after delivery was rather a bloody mucus amounting to nearly a pound in 24 hours, and attended by all the debilitating effects of the same quantity of red blood. There was no pain. With the usual regimen in such cases, she took 10 grain of the Prussiat in milk every third hour, until she had taken to the amount of 90 grains at which time, the discharge had nearly ceased, and the pulse which before small now became fuller. Bark and kino were administered after the discharge ceased, and completed the cure.

The third case was that of a negro woman, who about two months before her expect time, received a violent fall in climbing a fence. Before any one could get to her to

raise her from the ground, she discharged from the uterus at least two pounds of blood. She was too heavy to be taken up by the force around her, and was dragged into the kitchen. The blood, says the Dr. marked her paſsage to the house in nearly a continued stream. When she got there she fainted. Her clothes were cut off immediately, and her hips raised while she laid on the floor. Cold water was poured on her abdomen for an hour or more, to which time the discharge had been gradually decreasing. She was now raised upon some blankets; and cloths wet with cold vinegar and water, were constantly applied to her abdomen and labia. This accident occurred one afternoon, and this plan pursued all night. Ten grains of the Pruſsiat were then prescribed in milk, and repeated every 3 hours. She took six doses at this interval when the discharge entirely ceased.

These are also backed by my own experience; for I have known this remedy used in many instances, and often without the cooperation of any other medicine; and

always with the same happy results. I hold the Prussiat of Iron to be applicable in every case in which the acetate of lead is used, and it has, I think, this advantage over it, that in cases of irritability of the stomach, the former would be retained when the latter would not. It is itself an anti-irritant. The dose of No. 1. is ten grains to be taken in milk every three hours; or a very convenient way of administering it is in pills of five grains each every hour and a half.

When, however, all these remedies have failed, and the hæmorrhage continues profuse, we should next resort to the tampon; and the best with which we are acquainted, is a piece of fine sponge large enough to block up the passage of the vagina. It acts as a point d'appui for the superincumbent coagula, which by pressing upon the mouths of the ruptured vessels, put an end to the flooding. Previous to its introduction into the vagina, it should be squeezed in some strong vinegar, by which means, it answers a twofold

purpose, both on account of its mechanical, influence as well as constringent property.

Whether the *ovum* can be preserved or not, it is our duty in every instance as *regards the flooding*, to act as tho' it could. We should try to stop it as soon as poſsible. The idea that the woman's situation is irremediable until the ovum is expelled, is as mistaken as it is fraught with mischief.

We should whenever neceſsity requires, under any circumstances, make use of the tampon; for it not only stops the discharge, but stimulates the *uterus* to contraction, by which means, when the *ovum* *will* be expelled, a separation is much sooner effected.

Frequent touchings should be protested against, as they remove coagula; and should only be practised to ascertain when the ovum is entirely separated, and the condition of the *uterus* such as to favor expulsion.

No attempts should be made to get rid of the *ovum*

as long as the larger portion of it is within the uterus, unless the membranes are ruptured and the water evacuated. For by a rash interference the embryon is expelled and its covering retained, which until removed, is always a source of continual flooding and "other inconveniences". A good rule therefore as laid down by Dr. Dewees is never to rupture the membranes, until about the fifth month, unless the most cogent circumstances would seem to require it.

Whenever the secondines are retained, and the flooding in consequence perpetuated, we should get rid of them as speedily as practicable. We should never attempt to remove them by the hand, as up to the commencement of the fifth month, the cavity of the uterus is too small to admit it, or even a couple of fingers. If however, a large part of the placenta, be without the <u>os uteri</u>, we may then take it between two fingers, and remove it.

If no portion of the <u>placenta</u>, or a very small part,

be without the *os uteri*, we may succeed in withdrawing it by means of a small wire crotchet, employed by Dr. Dewees, and a plate of which is seen at the end of this essay. His directions for using it, are as follow: "The fore finger of the left hand is placed within or at the edge of the *os tincæ*; with the right we conduct the hooked extremity along this finger until it is within the *uterus*; it is gently carried up the *fundus*, and then slowly drawn downwards, which makes the curved point fix in the placenta; when thus engaged it is gradually withdrawn, and the placenta with it."

Sometimes when the *involucrum* remains after the embryo has been expelled, the Secale cornutum, in twenty grain doses, has been sufficient to effect its removal, and put a stop to the hæmorrhage.

In order to prevent a recurrence of the hæmorrhage when we have once succeeded in arresting it, we should avoid all exciting causes of the disease, and as occasion may call for, employ such of the rem-

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remedies we have noticed, as the patients condition would seem mostly to require. This constitutes, the third and last indication we have to fulfil.

Having now concluded with the first period at which hæmorrhage may take place, by a very natural transition, I shall paſs on to the —

Second period. — As I have been very minute in my account of the first period, I shall be as succinct as I poſsibly can in this, to do that justice to the subject which, from its great importance, it merits.

Hæmorrhages in this period may occur from the fourth and a half month of pregnancy to the full time of utero-gestation. Whenever they do, in proportion to the advancement of pregnancy and the extent of the surface exposed, will be the danger of the patient and the chance of relieving her. We should, therefore, suffer no discharge to take place from the uterus, without calling into requisition immediately, those remedies neceſsary to arrest it. By suffering

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it to continue, the props of the woman's strength are subverted, and her constitution gradually undermined.

The indications to be fulfilled in this, are "very like" to those of the first division. Physicians, however, differ as to the means by which these are to be accomplished. Some are in favor of internal remedies and external applications exclusively; others of the administration of medicine and the use of the tampon; and a third claſs put confidence alone in delivery.

I shall not undertake to scan each of these different opinions. All may be right, or all may be wrong, according to the condition of the patient, and the circumstances of the case.

Such a course of treatment as shall appear to me to be most efficient, I shall adopt, resting upon both time and experience to prove its orthodoxy or not.

The rules laid down for the government of the woman in the commencement of hemorrhage as in the first period of pregnancy, should be most rigidly enforced, and the

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and the remedies that were then used also employed.

In moderate cases of hæmorrhage, an injection per vaginam of any of the astringents, such as a decoction of red oak bark, alum water and the like, with the internal use of alum, acetate of lead and the Prussiat of Iron, may be sufficient to effect a cure. The latter medicine, I cannot urge too strenuously upon the notice of the profession. I have known it used in almost every stage of hæmorrhage in this period, without the aid of any other medicine, and always with the same desired effect. Besides I am authorized by my preceptor Dr. D. Curtis of Virginia, whose experience from many years of an extensive and succefsful practice, enables him to speak with confidence to say, that he has never seen a case of uterine hæmorrhage, that this remedy when timely resorted to, under any circumstances, has failed to relieve. Indeed there is no weapon (to use a figurative expression) with which I would undertake to combat this disease sooner than the Prussiat of

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If the stomach should be in such a state as to preclude the internal exhibition of the acetate of lead, it can as formerly directed, be administered per rectum.

Digitalis also is a remedy that has been recommended in this stage of hæmorrhage, and from its modus operandi and the high authority of Mr. Burns, we might, I think, with great propriety, venture to use it. The cases, however, in which it is applicable, are somewhat restricted. This gentleman says, "the Digitalis may often be given with much advantage in flooding, when the pulse indicates increased vascular action, and when we do not mean to proceed directly to delivery." He also goes on to show that it should not be given, when the pulse is "feeble and small", and there is an inclination on the part of the patient to vomit. It may be given in powder or tincture, in the dose of a half grain of the former every two hours, until the circulation is moderated; and of the latter, a table-spoonful t the

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at the same intervals, until the same effect is produced; in both instances, lengthening the intervals or discontinuing the medicine, as the pulse may indicate.

In the more violent cases, besides the Pruſsiat of Iron, or the acetate of lead, where the woman's situation is at all perilous, we should have recourse to the tampon. One or the other of these, or at least, one of the first and the last rarely fail to succeed

Dr. Dewees does not speak favorably of alum in these cases, and from its disordering the stomach when given in large doses, I should myself think, it was totally inadmiſsible. Injections also per vaginam, says the author (just referred to, "prove injurious by disturbing the patient, and removing a useful coagulum".

When we have exhausted all the resources which medicine can supply, or art almost suggest, and the situation of the woman is imminently hazzardous, and instantaneous relief indispensable, there is but one other alternative left, and that is delivery; it is our dernier [illegible]

report

The time when, and the circumstances under which delivery should be performed, alone present embarrasment to the practitioner. The simple operation itself, apart from these considerations, appears to me to be a difficulty of comparatively little magnitude. It is both easy to describe and to perform. But many are the victims that have been imolated upon the altar of a hasty and indiscriminate delivery, and hence it cannot be too severely depricated. In medicine, as in all other sciences, there are certain established principles, which when deviated from, almost always lead into error.

A good rule therefore in all cases, is never to rupture the membranes, unleſs the os tincæ, be either dilated or delatable, except the lives of both mother and child are at stake, and the flooding prove intractable to all other means.

Baudalocque tells us that "while the neck of the uterus retains all its natural thicknes and firmneſs, Dr Dewees thinks that this should never be done as it is calculated to give considerable irritation and thereby keep up the hæmorrhage, we are endeavouring to arrest.

and the orifice scarcely begun to open, nothing could justify the conduct of the accoucheur who should persist in endeavouring to deliver without delay."

But it may be asked in this state of things, when the blood is flowing in torrents as it were from the womb, and the woman's strength ~~is~~ rapidly paſsing away with it, what is to be done? The answer is at hand. Give the Pruſsiat of Iron, plug the os tincæ[+] block up the vagina with the tampon, endeavour to excite labor pains "by gently stretching the orifice of the uterus" and "frictions on the abdomen. If all of these fail to check the flooding and the os uteri has neither dilated or is disposed to dilate," then and not till then" should we venture to pierce the membranes, or attempt delivery.

Syncope sometimes supervenes, and whenever it does, we should, I think, always view it as a very inauspicious omen. It is a mark of extreme exhaustion, and as such, so far from being considered as welcome meſsenger, should constantly be looked to as the harbinger

of evil.

Denman hailed it as a most fortunate event and favorable symptom; but Dewees between whom and himself upon this subject there is some discrepancy of opinion contends that altho' "it has been useful quo usque ad hoc", yet by inculcating such a doctrine, the efforts of the practitioner are for the time paralyzed, and he patiently waits its occurrence, until from a loss of blood, when it does come on, the system is sunk below the point of reaction, and the patient sooner or later, perishes.

In all cases of syncope in order to bring about a reaction, we should administer stimulants and cordials, but not in such doses as to offend the stomach, or produce too great an excitement.

I must remark en passant, that if from cold applications to the abdomen, the woman becomes weak, and the pulse flags, they should instantly be discontinued, and a warm blanket substituted. Precaution

* This remedy is calculated to act upon the principle of revulsion.

+ Mr. Burns says, they may occur at any period of pregnancy.

also should be taken not to wet the bed more than can be avoided, and during the application of cold, to keep the feet and legs of the patient perfectly warm. For this purpose Dr. Dewees, recommends bottles of warm water well corked, and heated flannels.*

When, however in despite of all our exertions, delivery becomes necessary, and the proper time has arrived, the operation should be undertaken, and for the mode of performing it, I refer to Burns's obstetrical works and Dewees System of Midwifery.

There are also certain cases of uterine hæmorrhage, requiring the use of the forceps, and for these, I refer to Dewees's System of Midwifery, second edition, with additions, pages 421 and 2.

Hæmorrhages from the implantation of the placenta over the neck of the uterus, next demand our consideration.

These may occur from the sixth+ month of pregnancy to the full time of utero-gestation. The rea-

reason of this is obvious. The neck of the uterus is then compelled to dilate, in order to accommodate itself to the bulk of the fœtus; in doing which, a portion of the connecting medium between the uterus and placenta is broken up, and a hæmorrhage follows. "This," says Denman, "is often, but not always in proportion to the space of the placenta attached over the os uteri, or to the quantity separated. For women have been in as great danger when the mere edge of the placenta was fixed upon the os uteri, as if the middle had been placed over it."

When however it does come on, there is no security to the woman until she is delivered, against a recurrence; and every repetition of an attack, but serves to pull down that strength which however great in the beginning, will not be able to sustain itself, under so great an expenditure of blood. For the author whom we have just quoted says, that "the body may be reduced to [illegible] they [illegible] period [illegible]

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such a state that there is barely a sufficient quantity of blood, or of powers, to carry on the business of life; upon a very nice balance; and of course the additional loss of a very small quantity may altogether destroy the powers of living, and the patient die of the hæmorrhage, tho' the quantity of blood, which shall immediately precede her death may be small; but unfortunately she was able to bear the loss of none".

Whenever hæmorrhagy arises from this cause, it is always alarming; and as all other signs, are in themselves very equivocal, to ascertain whether the placenta present or not, we should introduce the finger into the os utero, and then if instead of the "smooth membranes a soft and fungous substance of a fibrous structure" and tolerable firmness offer itself to the touch, we may be pretty well assured, it is a placental presentation. But in conducting this examination, we should use the utmost degree of precaution, least by removing a coagulum, the unrestrained blood again gushes rth.

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If the hamorrhage be moderate, we should endeavour as formerly directed, to obtain a perfect state of repose, and require of the patient to keep as much as poſsible, in a horizontal position. Should her pulse indicate it, or her habit be plethoric, she should be bled. Her drink and food should be such as have already been mentioned, and if the flooding continue notwithstanding, we should administer the Pruſsiat of Iron, or acetate of lead, and make use of cold applications to the abdomen & *pubes*; and if neceſsary introduce into the vagina, a sponge imbued with vinegar, or alum diſsolved in wine.

Should all our exertions prove unavailing, and the woman's life be in imminent danger, we should excite the contraction of the *uterus*, and deliver her. This must be practised; for altho' the child runs the greater risk as the period of gestation is curtailed, yet by procrastinating too long, the

* See Baudalocque's midwifery with notes by Dewees page 247.

mother's death is inevitable, and the child's almost as certain.

We are not, however, often obliged to interfere before the os uteri is in a favorable disposition for delivery; for by the use of the plug or tampon, the bleeding may generally be stayed, and this desideratum obtained. In the first part of this assertion, I am supported by Dr. Burns, and in the latter both by himself and Dr. Dewees.

Whether the os uteri be in a favorable condition or not, the operation is nearly the same. We should separate the placenta whenever it can be ascertained, always from that side which is nearest to the orifice of the uterus, and then rupture the membranes at its edge, search for its feet, and deliver as in footling cases.*

If the *placenta* adhere to the *uterus* after the delivery of the child, we should wait for its contraction to effect a separation, unleſs the hæmorrhage be so great as to require our interference sooner.

We should not suffer the membranes (as they are generally wont to do) to remain behind after the removal of the *placenta*; as they are apt to expose the woman to "troublesome accidents," and subject the physician to injurious imputations. We should therefore lay hold of them close to the *placenta* after it is withdrawn and carefully draw them out, at the same time using frictions on the abdomen to excite the contraction of the uterus.

Having concluded my account of the second period at which hæmorrhage may take place I shall now pass on to the—

Third period.— Hæmorrhages may occur in this period at any time from the birth of the child to the expulsion of the placenta.

In every natural labor after the child is delivered, the uterus contracts upon the *placenta* and membranes so as to break up their attachments and afterwards to expel them. The hæmorrhage in this case is but slight and

* In the Baadalengari's missionary with notes by Dean, page 247.

does not continue so long; for the mouths of the ruptured vessels from which issues the blood are instantly closed by the contraction of the *uterus* and all farther discharge prevented.

But on the contrary where the *uterus* fails to contract after the delivery of the child and the separation of the placenta, or even where the latter is only partially detached a flooding to a greater or less extent, is always sure to follow.

A separation of the *placenta* is generally effected by the contraction of the muscular fibres of the uterus, and no hæmorrhage can under any circumstances occur, unless this separation be induced in some way or other; either by the cause already mentioned or mechanical violence offered to it". For," says Dr. Dewees," so long as the *placenta* preserves its continuity with the *uterus*, no flooding can ensue, should this viscus be in a state of atony or exhaustion."

Hence it follows from what has been said, that if the sid

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the *placenta* be in part, or entirely detached, and the *uterus* in a state of atony or *inertia* a flooding will be the inevitable consequence. These things being admitted, the main indications to fulfil will at once present themselves. The contractile power of the *uterus* should be supported, and if wanting, all necessary means ~~to~~ employed, to restore it.

To answer the first we should endeavour to prevent the *uterus* "from emptying itself too suddenly"; for if the child be delivered by one contraction, or hastily withdrawn after "the head is born, hæmorrhage takes place, and the *uterus* in a majority of cases contracts upon the *placenta* like an hour-glass"; giving origin to the term hour-glass contraction.

The second may be answered in several ways, but the most simple and at the same time efficient with which we are acquainted, is that of frictions on the abdomen. This is the most convenient and appropriate stimulus we have we have, and if persevered in suf-

× Dr. Dewees thinks that carrying it into the vagina will answer.

sufficiently long, rarely fails to succeed. The <u>uterus</u> when acted upon in this way, appears to be equally sensible to this mechanical stimulus, as when applied to its internal surface; and it is certainly preferable, because by the latter inflammation is sometimes induced, and the flooding increased, whereas by the former no such consequences are known to ensue.

Another very effectual means of answering the same end, is the application of cold. The woman should be kept quiet, fresh air admitted, and the quantity of her clothes and bed-cover leſsened. Cloths dipped in cold water should be applied over the abdomen, and the water itself thrown up into the uterus; or if we have no syringe, a sponge dipped in water and carried up into its <u>fundus</u>, will answer the same purpose. Ice in this way* has been used with manifest advantage; but during the whole of this treatment, the feet and legs should be kept warm with bottles of warm water and heated flannels.

Whenever the hæmorrhage is alarming, in addition to the preceding treatment, we might administer the Prussiat of Iron, or acetate of lead alone, or if the woman's strength be much exhausted, combined with opium, according to the directions already laid down.

The ergot also from its arousing the dormant energies of the uterus, might prove an invaluable remedy in this disease; but should be administered in no case, wherever there is nausea or vomiting. We should by no means attempt to detach, or bring away the *placenta* by force. Our object should be in every case to solicit the contractions of the *uterus*, so that by its own natural efforts, it may be able to cast off its contents.

When however it becomes neceſsary in cases where a part of the placenta maintains a pretty strict connexion with the *uterus* we should gently and cautiously insinuate our fingers between them, and endeavour to *diſsolve* it. But we should rely more

* A [illegible] [illegible] thunder that everything into the sea goes with murmur.

for this purpose upon the natural efforts of the uterus than by any power made use of by the hand. As however there is no way by which I can place the subject in a more advantageous point of view, I will quote the language of Dr Dewees in relation to it. This gentleman says "the hand should be introduced, and the separated portion of the placenta sought for. from this part the hand should take the direction of the adhering portion, and if it appear that it would require considerable force to destroy its connexion with the uterus, every attempt to detach it should instantly be desisted from, and only the piece or pieces found loose, or not adhering be removed; the remaining part must be trusted to the efforts of nature".

When the flooding continues after a part of the placenta is removed, we can continue at our discretion any of the remedies that have already been detailed, or inject into the uterus alum and water or any other

* Dr Dewees has found a piece of quick lime slacked in an infusion of chamomile flowers, and suffered to settle, answer an excellent purpose.

liquid astringent.*

In the spasmodic contraction of the uterus upon the placenta "forming what is called the hour-glaſs" we must slowly and cautiously dilate the stricture" with the hand, and then proceed according to the directions for the management of the other cases.

In cases of concealed hæmorrhage or in those where the blood is extravasated in the cavity of the uterus and prevented from paſsing out by a coagulum stopping up the paſsage; we should use frictions on the abdomen, and if the uterus commence to harden continue until we suppose it has acquired a disposition to contract and if no coagula be then discharged from the vagina, we may conclude that the cervix uteri is "too resisting to be overcome by the contraction of the body and fundus." In this case we should direct an assistant to keep up the frictions and a hand of the physician should be conducted into the vagina and all coagula there removed. The fingers should then be

insinuated one after the other into the os uteri, so as gradually to effect a dilatation after which the wrist should be preſsed to the side of the cervix uteri, so as to allow a paſsport for the coagula. In this way may we release from its imprisonment, the incarcerated blood. But should the placenta be detached, or should we separate it, neither it or the hand should be withdrawn, until the uterus manifests a disposition to contract.

In all hæmorrhages in this period we should attend closely to the condition of the stomach. A considerable waste of blood not unusually gives rise to nausea or vomiting; the former of which from its influence on muscular fibre, is calculated to counteract thro' the medium of the stomach, that effect upon the uterus, which it should be our principle object to produce and secure.

The exertions of vomiting are sometimes so great as to induce a state of syncope, and this is always a dangerous symptom; but not equally so in all women, as in some, from idiosyncracy this state may be brought on sooner than

other, altho' as much blood may not be lost.

In these two conditions of the stomach, nothing answers better than a fresh pill of opium of two grains, given every hour or so, until the vomiting has ceased or the stomach becomes composed.

For the purposes of supporting the action of the stomach, when there is an evident sense of sinking, Dr. Burns recommends soup properly seasoned, to be taken in small quantity and often; or to invigorate and sustain its strength, cordials, as Madeira diluted or pure, in small doses until signs of recovery appear, and the pulse steadily be felt; but neither one nor both should be given to such lengths as to load the stomach, and thereby produce "sickness and anxiety".

Whenever there is a disposition to syncope from the loss of blood, a small quantity of brandy and water should be given every few minutes; or wine with ice in it, or a spoonful of ice cream until it is relieved. These remedies should be followed by the application of bottles of warm

* In cases where the woman is in the habit of exceſsive flooding very soon after the expulsion of the <u>placenta</u> in order to prevent a recurrence Dr. Dewees has found the following mixture given a short time previously to the birth of the child to produce the happiest

water and heated flannels to the feet and legs to keep them warm.

I have now concluded my account of hæmorrhages of the third, and shall next consider those of the Fourth period.— Hæmorrhages of this period occur after the expulsion of the placenta and require a mode of treatment very analogous to the last. I shall therefore be relieved of the necessity of dwelling to any considerable extent upon it. A few remarks will suffice.

The main indication to fulfil is to provoke the contraction of the uterus, as until this is accomplished no permanent relief is to be expected. With this view any of the remedies that have already been detailed, as friction on the abdomen, the prussiat of Iron, acetate of lead, ergot,* cold applications et cetera should be employed at the discretion of the practitioner.

In cases of concealed hæmorrhage the directions already given are identically the same—

When a portion of the placenta is left in part or results.

℞ Pulv. Secale Cornut. ʒß
Sacch. alb: ʒß.
Aq. Cinnamon Syrup - ℥j ~~An~~

Of this one third to be given every twenty minutes about an hour before the child is expected to be born.

entirely attached to the *uterus* which is sometimes the case a Flooding will sooner or later supervene; but as soon as this can be ascertained unleſs it should be a portion which is too adherent it is best to remove it. But should it not be discovered until the uterus has contracted upon it, we must rely upon the powers of nature for its expulsion, least by interfering, we bring on Flooding, create pain or excite inflammation - Should there be Flooding however the retained portion must be removed which is easily done as the mouth of the *uterus* is generally open or else disposed to dilate. But when this does not obtain we must trust to nature; and to staunch the bleeding make use of the tampon which should be removed every twelve hours and the *vagina* previous to its reposition washed out with chamomile tea, wine and water &c.

Whenever there is a doubt as to the retention of a portion of the *placenta* after delivery which is sometimes not suspected for several days, we have reasonable

grounds to infer that such is the case when the returns of pain are often, and the discharge of coagula from the vagina frequent and "followed by fluid blood upon each relaxation of the uterus". We should therefore proceed accordingly. If the os uteri be in a favorable condition that is if it be yielding we must introduce the hand carefully into the uterus separate the adhering portion and remove it. This may be done either by the "fingers" by the natural efforts of the uterus or by the wire crotchet already spoken of. If the first and last fail, we must trust alone to the second.

I have thus concluded the four periods in which hæmorrhage may take place in the impregnated uterus. But my subject is not yet complete. One link more is wanting to form an entire chain which altho' it may not be considered as immediately connected is neverthe-leſs so nearly allied, as to constitute if not an eſsential, at least an important appendix to it. I mean hæmorrhages of the —

Unimpregnated *uterus*.

That hæmorrhages may occur in the unimpregnated *uterus* we have I think ample reason to believe. We know that the rupture of a blood vessel of the lungs, will give rise to hæmoptysis; of the stomach, to hæmatemesis, and of the nose, to epistaxis. Have we not then as good ground, nay better, (considering the periodical afflux of blood to the vessels of the *uterus*) to suppose that their coats may be forced to give way and a hæmorrhage follow? As therefore a greater quantity of blood is sent to the *uterus* at some times than others, as for instance at the catamenial periods, I should infer *a fortiori*, that other things being equal, at those very periods, it was more liable to hæmorrhage.

The only affection with which this disease can be confounded is Mænorrhagia, from which it may readily be distinguished, (as I have before intimated) by the discharges being coagulated, as well as by an almost invariable pain in the region of the *uterus*.

* Dr. James has in a very friendly manner, for which I feel indebted to him informed me that in a case of uterine hæmorrhage after the decline of the menses, which fell to the management of Dr. ~~[illegible]~~ Parrish and himself, he found a strong decoction of galls, made by pouring a gill of boiling water on the powder, n being suffered to cool, without filtering, and injected into the uterus by a small gum elastic tube similar to that for the stomach, with a syringe at

I have said enough in a cursory manner, and I hope satisfactorily to show that all sanguineous discharges from the unimpregnated uterus are not neceſsarily the result of a secretory action; but that there are certain pathognomonic symptoms, that denote this affection, the appearance of which, places its presence beyond the reach of cavil or doubt.

This disease, says Dr. Dewees, is much more common "with married women and widows, than with young girls." When it does occur, the treatment is exactly the same as in uterine hæmorrhage already noticed. The pruſsiat of iron and the acetate of lead internally, and a strong decoction of galls as an injection,* constitute those remedies upon which we should mainly rely. The first medicine, I have known used in several cases recently, and with the most speedy relief. We cannot, I am sure, repose too great confidence in it.

I have now finished what I had to say upon this subject. The ground which I have taken, I hope may not prove untenable. No region has broken upon my view, that the end answered, when other means, had failed. Considering the source from which this information is obtained, we can without hesitation determine, what reliance should be placed upon the remedy.

I have not entered, and attempted to explore. If I have failed, I have the consolation to know that I am not the first, and to believe that I shall not be the last. Woman, the subject of my reflections, the top-piece of creation, whose self commands our highest admiration, has drawn forth this production, which juvenile as it is, I submit to the ordeal. And shall I not be excused for studying to improve those means, which may alleviate her sufferings and contribute to her comfort?

But before concluding, I wish to tender to the Professors respectively, my sincere thanks and grateful acknowledgments for the many opportunities which each has afforded me of improvement from his lectures; and to offer up my aspirations for the prosperity of that Institution which I have now the honor of attending.

May the lamps of science and philosophy continue to burn within her walls, and may she annually send forth sons, the ornaments of herself, and the pride of their country!!!